In the Claims

1. (Currently Amended) A method for ~~homogenizing~~analyzing a raw sample, the method comprising:

a) measuring out a portion of the raw sample;

b) measuring out a volume of a binding solution;

c) combining the portion and the volume to form a mixture; ~~and~~

d) grinding the mixture;

e) pelletizing the mixture; and

f) intensively analyzing the sample.

2. (Original) The method of claim 1 wherein the binding solution comprises a cementing agent, an activator, and a solvent.

3. (Original) The method of claim 2 wherein the cementing agent comprises an epoxy.

4. (Original) The method of claim 3 wherein the epoxy comprises C4 Resin.

5. (Original) The method of claim 2 wherein the activator comprises Activator D.

6. (Original) The method of claim 2 wherein the solvent comprises isopropyl alcohol and acetone.

7. (Original) The method of claim 1 wherein step d) causes the mixture to form a gel.

8. (Currently Amended) The method of claim 1 further comprising:

eg) dispersing a plurality of sample particles having a mean diameter of less than 6 microns throughout the mixture.

9. (Currently Amended) The method of claim 1 further comprising:

eg) dispersing a plurality of sample particles having a particle diameter standard deviation of less than 0.01 millimeters throughout the mixture.

10. (Original) The method of claim 1 wherein the sample is a geological substance.

11. (Original) The method of claim 10 wherein the sample is drilled cuttings from a subterranean earthen wellbore.

12. (Original) The method of claim 1 wherein the sample is a powder metallurgy.

13. (Original) The method of claim 1 wherein the sample is a ceramic.

14. (Original) The method of claim 1 wherein the sample is a food.

15. (Original) The method of claim 1 wherein the sample is a pharmaceutical.

16. (Original) A method for homogenizing a raw sample, the method comprising:

a) measuring out a portion of the raw sample;

b) measuring out a volume of a first solution;

c) measuring out a volume of a second solution;

d) combining the sample portion, the first volume, and the second volume to form a mixture; and

e) grinding the mixture.

17. (Original) The method of claim 16 wherein the sample portion is in the range of 0.45 grams and 0.50 grams.

18. (Original) The method of claim 16 wherein the first volume is approximately 0.50 milliliters.

19. (Original) The method of claim 16 wherein the second volume is approximately 0.50 milliliters.

20. (Original) The method of claim 16 wherein the first solution comprises C4 Resin and a carrier solution having isopropyl alcohol and acetone, wherein the ratio of grams of C4 Resin to milliliters of carrier solution is approximately 0.0633 to 1.

21. (Original) The method of claim 20 wherein the carrier solution comprises 90 percent by weight isopropyl alcohol and 10 percent by weight acetone.

22. (Original) The method of claim 16 wherein the second solution comprises Activator D and a carrier solution having isopropyl alcohol and acetone, wherein the ratio of grams of Activator D to milliliters of carrier solution is approximately 0.0158 to 1.

23. (Original) The method of claim 16 wherein step e) comprises grinding only the sample portion and occurs before step d).

24. (Original) The method of claim 16 wherein the ground mixture comprises sample particles having a mean diameter of less than 6 microns.

25. (Original) The method of claim 16 wherein the ground mixture forms a gel.

26. (Original) A method for pelletizing a raw sample, the method comprising:

a) measuring out a first portion of the raw sample;

b) measuring out a volume of an epoxy solution having a solvent;

c) measuring out a volume of an activator solution having the solvent;

d) combining the first sample portion, the epoxy solution volume, and the activator solution volume to form a spiked sample;

e) grinding the spiked sample;

f) heating the spiked sample; and

g) applying a force to the spiked sample to form a first pellet.

27. (Original) The method of claim 26 wherein step f) further comprises:

i) heating the spiked sample using a first temperature; and

ii) heating the spiked sample using a second temperature.

28. (Original) The method of claim 27 wherein the first temperature is in the range of 350°F to 370°F and is used for approximately one minute.

29. (Original) The method of claim 28 wherein the second temperatures is in the range of 145°F to 165°F and is used for approximately 4 minutes.

30. (Original) The method of claim 29 wherein the second temperature is 155°F.

31. (Original) The method of claim 26 further comprising:

h) curing the first pellet; and

i) distributing a binding agent substantially homogeneously within the first pellet.

32. (Original) The method of claim 31 wherein step h) comprises applying heat to the first pellet at a temperature in the range of 350°F to 370°F.

33. (Original) The method of claim 32 wherein the heat is applied at a temperature of 355°F for approximately 3 minutes.

34. (Original) The method of claim 31 wherein the first pellet is approximately 98 percent by weight the raw sample and approximately 2 percent by weight the binding agent.

35. (Original) The method of claim 31 wherein the solvent is substantially evaporated.

36. (Original) The method of claim 26 further comprising re-powdering the spiked sample before step g).

37. (Original) The method of claim 26 wherein step g) is achieved using a die and a press.

38. (Original) The method of claim 37 wherein the press exerts a pressure of approximately 5 tons for approximately 18 seconds on the die, and releases from the die over approximately 12 seconds.

39. (Original) The method of claim 26 wherein step f) is achieved using a hot plate.

40. (Original) The method of claim 26 wherein step f) is achieved using ultra violet rays.

41. (Original) The method of claim 26 wherein step f) is achieved using electricity.

42. (Original) The method of claim 26 wherein the first pellet has a mixing index substantially equivalent to 1.

43. (Original) The method of claim 42 wherein the mixing index is greater than 0.95.

44. (Original) The method of claim 26 further comprising distributing a plurality of sample particles having a mean diameter of less than 6 microns throughout the first pellet.

45. (Original) The method of claim 26 further comprising distributing a plurality of sample particles having a particle diameter standard deviation of less than 0.01 millimeters throughout the first pellet.

46. (Original) A method of taking an intensive measurement of a sample, the method comprising:

a) measuring out a first portion of the sample;

b) measuring out a volume of an epoxy solution;

c) measuring out a volume of an activator solution;

d) combining the first sample portion, the epoxy solution volume, and the activator solution volume to form a spiked sample;

e) grinding the spiked sample;

f) drying the spiked sample;

g) applying a force to the spiked sample to form a pellet;

h) curing the pellet to form a binding agent; and

i) ablating the surface of the pellet.

47. (Original) The method of claim 46 wherein step i) is achieved using a forceful beam.

48. (Original) The method of claim 47 wherein the forceful beam further comprises a LIBS analysis.

49. (Original) The method of claim 46 further comprising smoothing a plurality of sample particles.

50. (Original) The method of claim 46 further comprising analyzing the ablated pellet material.

51. (Original) The method of claim 50 wherein the analyzed pellet material is substantially free of variances in the sample material and binding agent ablated.

52. (Original) The method of claim 46 wherein the pellet maintains structural integrity during step i).

53. (Original) The method of claim 52 wherein a compressional force stress in the pellet is less than a structural threshold of the pellet.

54. (Original) The method of claim 46 wherein step i) forms a crater on the surface of the pellet, and wherein the surface of the pellet is substantially free of collateral damage near the crater.

55. (Original) The method of claim 46 wherein the first pellet is substantially free of fractures extending through the pellet.

56. (Withdrawn) A solution for binding a ground sample, the solution comprising:

an epoxy having C4 Resin;

an activator having Activator D; and

a solvent having isopropyl alcohol and acetone.